

Appl. No.: 10/553365
Reply to Office Action of: 09/30/2008

Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 1.
Fig. 1 has been amended to include the designation of "Prior Art".

Attachment: Replacement Sheet

REMARKS

The drawings were objected to for not including a designation/legend. The drawing has been amended above to address the examiner's concerns.

Claims 1-3, and 10-14 were objected to for various informalities. The claims have been amended above to address the examiner's concerns.

Claims 1-3, 10, and 14 were rejected under 35 U.S.C. §102(b) as being anticipated by Haavisto (EP 1215894). Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Haavisto (EP 1215894) in view of Obrador (US 2004/0090548). Claims 12 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Haavisto (EP 1215894) in view of Hsu et al. (WO 01/01675). The examiner is requested to reconsider these rejections.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). It is submitted that Haavisto fails to teach each and every element as set forth in claims 1 and 14 for at least the reasons described below.

Applicants have amended claims 1 and 14 to recite, *inter alia*, "wherein the application processor includes a programmable hardware accelerator and the programmable hardware accelerator is a SIMD processing accelerator optimized for camera image processing".

The features which have been added to the independent claims were originally claimed in dependent claims 12 and 13.

Embodiments of the invention as defined by the amended independent claims relate to a mobile camera telephone and an associated method. The mobile camera telephone comprises a camera module for capturing an image and providing digital data in an RAW format. The mobile camera telephone also comprises an application processor. The application processor comprises a CPU for controlling the operation of the telephone **and** hardware arranged to perform camera image processing on the digital data in RAW format received from the camera module. The application processor includes a programmable hardware accelerator and the programmable hardware accelerator is a SIMD processing accelerator optimized for camera image processing.

RAW format is defined on page 2 lines 24 and 25 of the description as "a data format obtained by digitizing analog data outputted from an image sensor such as a CMOS sensor or a CCD sensor".

The apparatus as defined by the independent claims therefore comprises a camera module and an application processor. The application processor includes a CPU for controlling the operation of the telephone and hardware arranged to perform camera image processing of the digital data received from the camera module.

Haavisto relates to a method and a device for data transmission between an electronic device and a camera module integrated into it. Haavisto discloses a device comprising a

camera module 301 that is connected through a first transmission bus 310 to a processor 314 and via the first transmission bus and a second transmission bus 311 to an image processing module 316.

Haavisto does not disclose an application processor including a CPU **and** hardware arranged to perform camera image processing. It is clear from Fig. 3 of Haavisto that the image processing module 316 and the processor 314 are separate and that they are not included in an application processor.

Haavisto therefore fails to disclose a key feature of embodiments of the invention as defined by claims 1 and 14, namely that the mobile camera telephone comprises an application processor including a CPU for controlling the operation of the telephone and hardware arranged to perform camera image processing on digital data received from a camera module. The inclusion of the CPU that controls the operation of the telephone and the image processing hardware in a single application processor is a new and inventive feature. This new and inventive feature results in a reduced number of components in a camera module and the use of the application processor for image processing means that a separate image processing module is not required. Embodiments of the invention therefore have size and cost advantages over the prior art.

There is nothing within the teachings of Haavisto which would motivate a person skilled in the art to modify the disclosure so as to produce the claimed invention. To fall within embodiments of the invention as claimed in the independent

claims the person skilled in the art would need to make a number of inventive steps namely, the use of the processor 314 to control the operation of the telephone when this is not suggested in Haavisto and the inclusion of the processor 314 and image processing module 316 in an application processor where this is also not suggested by Haavisto.

Therefore, for the above mentioned reasons the applicants maintain that the present invention is new and non-obvious with respect to the cited references. The features of claims 1 and 14 are not disclosed or suggested in the art of record. Therefore, claims 1 and 14 are patentable and should be allowed.

Though dependent claims 2, 3, and 10 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 1. However, to expedite prosecution at this time, no further comment will be made.

In regards to claim 11, there would be no reason why a person skilled in the art would modify the teachings of Haavisto to introduce the image processing module and the processor as a single entity because Haavisto teaches that it is important for the image processing to be carried out as quickly as possible. Combining the image processing module with the application processor would reduce the speed at which the image processing could be carried out and would also require modification of the other components of the device such as the data bus.

The examiner maintains that Hsu discloses an SIMD which is a type of program accelerator. However the applicants maintain that it would not be obvious to combine the teachings of the two references because there would be no motivation to combine the teachings of the two documents. It would not be straightforward to combine the two different types of apparatus in the two different references. Also there is no indication in the prior art of which features would be selected from each of the two documents if a person skilled in the art were to attempt to combine them.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. (see MPEP 2143.01, page 2100-98, column 1). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination (see MPEP 2143.01, page 2100-98, column 2). A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is **not sufficient** to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. (see MPEP 2143.01, page 2100-99, column 1) Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). >See also Al-

Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.)

In the present case, there is no teaching, suggestion, or motivation, found in either the references themselves or in the knowledge generally available to one of ordinary skill in the art, to provide the apparatus as claimed in claim 11. The features of claim 11 are not disclosed or suggested in the art of record. Therefore, claim 11 is patentable and should be allowed.

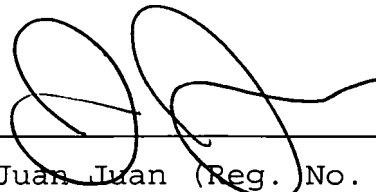
Claims 12 and 13 have been cancelled without prejudice.

Claims 15-18 have been added above to further claim the features recited therein.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Accordingly, favorable reconsideration and allowance is respectfully requested. If there are any additional charges with respect to this Amendment or otherwise, please charge deposit account 50-1924 for any fee deficiency. Should any unresolved issue remain, the examiner is invited to call applicants' attorney at the telephone number indicated below.

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Respectfully submitted,



Juan Juan (Reg. No. 60,564)

1/27/2009

Date

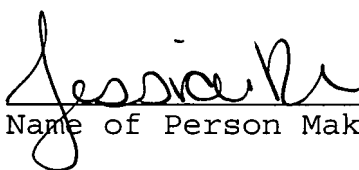
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